

Renewable energy consumption and economic growth nexus: a fresh evidence from West Africa

ABSTRACT

This paper estimates the impact of renewable energy on economic growth in West African countries using panel dynamic ordinary least squares (DOLS) by employing a sample of 15 West African countries covering the 1995-2014 period. The results indicated that renewable energy consumption slows down economic growth in these countries. This is attributed to the nature and source of renewable energy used in West Africa, which is majorly wood biomass. The wood biomasses used in West Africa are usually unclean and highly polluting when burnt. On the other hand, the use of clean energy sources like solar, wind and hydropower which does not have a side effect on human health and the environment is less in West Africa. As such, renewable energy use can slow down economic growth by lowering productivity when unclean and inefficient sources are used. The study recommends that (1) cleaner technologies should be employed to optimize the benefits of wood biomass as a renewable source of energy while minimizing its adverse effects; (2) the share of other renewable energy components such as solar, wind and geothermal should be increased in the renewable energy mix of the sub-region of West Africa and (3) greater commitment to achieving sustainable renewable energy by West African authorities is needed.

Keyword: Renewable energy; West Africa; Economic growth; Panel DOLS